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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,201	02/16/2000	Michael F. Young		6486

7590 02/26/2003
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EXAMINER

PAN, YUWEN

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/505,201

Applicant(s)

YOUNG ET AL.

Examiner

Yuwen Pan

Art Unit

2681



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 7-19, 28-31 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 20-27 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Claims 1-5, 7-19, and 28-31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show "PC board", page 12 and line 1, as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: reference number "61", page 12, has been used to designate both "PC board" and "capacitor".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2681

4. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Kielmeyer et al (US005669068A).

Kielmeyer et al disclose a telecommunication device having an antenna (see column 1 and lines 21-24), comprising:

A bi-directional switched amplifier, said amplifier being switched between transmit and receive modes (see column 4 and lines 62-66);

Said bi-directional switched amplifier further being located physically adjacent to said antenna, (see column 2 and lines 60-64), such that signal losses between said bi-directional switched amplifier and said antenna are negligible (see column 1 and lines 55-59).

5. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (US00576890A).

Yamada et al disclose a bi-directional switched RF amplifier comprising:

An external connection to an antenna, (see figure 2, item 1),

An external connection to a transceiver radio, (see figure 2, items 8 and 12),

A transmitting amplifier (see figure 2, item 4),

A receiving amplifier (see figure 2, item 10),

Said transmitting and said receiving amplifiers being arranged between said radio and antenna external connections (see figure 2),

A double pole, double throw switch, one switch pole connected to said radio external connection and the other switch pole being connected to said antenna external connection (see figure 2 and column 2 and lines 47-58),

Such that when said double pole, double throw switch is in one position the transmitting amplifier is disconnected from said external connections, and the input of said receiving amplifier is connect to said antenna external connection and the output of said receiving amplifier is connected to said radio external connection (see column 3 and line59- column 4 and line 10),

Such that when said double pole, double throw switch is in the other position the receiving amplifier is disconnect from said external connections, and the input of said transmitting amplifier is connected to said radio external connection and the output of said transmitting amplifier is connected at said antenna external connection (see column 3 and line59- column 4 and line 10), and

Said position of said double pole, double throw switch being controlled by a controller, reads on transmit power sense circuit (see figure 2 and item 15, column 4 and lines 62-64).

6. Claim 32 is rejected under 35 U.S.C. 102(b) as being anticipated by Kawano et al (US005267297A).

Kawano et al disclose a telecommunication system, comprising:

A bi-directional radio frequency amplifier (see figure 1 item 23, 28, 8, 7, and 10) in a waterproofed housing (see figure 1 and items 18-22) with an adjacently mounted antenna (see figure 1 and item 6) and a first connection to said antenna located on the lower side of said waterproofed housing (see column 7 and lines 1-58),

A single radio frequency and direct current power line (see figure 6 and item 49) connected between a second connection to said lower side of said waterproofed housing and a

Art Unit: 2681

direct current power injector removed from said antenna (see figure 6 and 7, column 12 and lines 50-67),

A radio transceiver connected to said direct current power injector, and terminal device connects to said radio transceiver to communication data through said system (see figure 5 and items 35, column 11 and lines 30-57).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (US00576890A) in view of Kielmeyer et al (US005669068A).

With respect to claim 21, Yamada et al disclose an analogous device as cited in claim 20. Yamada et al do not disclose receiving amplifier is a low noise amplifier.

Ki elmeyer et al disclose utilizing a low noise amplifier for a receiving amplifier (see column 7 and line 16-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ki elmeyer with Yamada's device, such that an output impedance presented by transmit amplifier does not affect the input impedance presented to receive amplifier.

9. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (US00576890A) and Kielmeyer et al (US005669068A) as applied to claims 20 and 21 above, and further in view of Nakatuka (US005777530A).

With respect to claim 22, Yamada et al further disclose a bandpass filter connect between said antenna external connection and said receiving amplifier input (see figure to and item 9),

Yamada et al and Kielmeyer et al do not disclose pads, including attenuation pads, connected to at least one of said receiving amplifier output and said transmitting amplifier input.

Nakatuka discloses attenuation pads, connected to at least one of said receiving amplifier output and said transmitting amplifier input (see figure 3, column 6 and lines 22-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Nakatuka with Yamada and Kielmeyer et al's device, such that saturation of signal is avoided.

With respect to claim 23, Kielmeyer further disclose both receiving and transmitting amplifiers is supplied by DC power (see column 7 and lines 1-15).

10. Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kielmeyer et al (US005669068A) in view of Hamada (US Patent# 4,403,343).

With respect to claim 24, Kielmeyer et al disclose a remote bi-directional switched RF amplifier. Kielmeyer et al do not disclose a direct current power injector connected to the bi-directional switched RF amplifier through a current sensor.

Hamada discloses a comparator (figure 1 and item 5), reads on a direct current power injector, powered by direct current and connect to tuner circuits, reads on bi-directional switched RF amplifier (see column 1, lines 50-58, column 2 and lines 42-56).

It would have been obvious to one ordinary skill in the art at time the invention was made to combine the teaching Hamada with Kielmeyer et al's device, such that electric field intensities would detected and transmitting or receiving would be indicated.

With respect to claim 25, Hamada and Kielmeyer do not teach a capacitor is connected between DC power injector and radio transceiver.

The examiner takes "Official Notice" of the fact that is notoriously well known in the art to utilize a capacitor, in order to block the direct current.

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to utilize a capacitor within Kielmeyer and Hamada's device such that no DC would flow back to transceiver radio.

With respect to claim 26, Hamada further disclose current sensor comprises a power resistor with two terminals in series between source of direct current and tuner circuits, reads on bi-directional switched RF amplifier (see figure 1 and items RE),

A differential voltage comparator (see figure 1 and items 5) is connected across said power resistor terminal to determine to operational mode of tuner circuits.

With respect to claim 27, Hamada further disclose a pair of indicator speakers (see figure 1 and items 11 and 12) to indicate which tuner circuit is in operational mode. It would have been obvious to one ordinary skill in the art to replace indicator speaker with indicator lights.

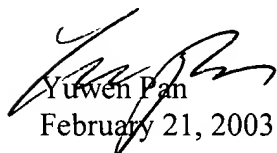
Conclusion


Art Unit: 2681

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuwen Pan whose telephone number is 703-305-7372. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on 702-305-4778. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.


Yuwen Pan
February 21, 2003


DWAYNE BOST
SUPERVISORY PATENT EXAMINER
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